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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,140	07/31/2001	George E. Berkey	Berkey 33B	4776
22928	7590	04/01/2004	EXAMINER	
CORNING INCORPORATED			HOFFMANN, JOHN M	
SP-TI-3-1			ART UNIT	
CORNING, NY 14831			PAPER NUMBER	
			1731	

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/919,140	Applicant(s) BERKEY, GEORGE E.	
	Examiner John Hoffmann	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Claims 30-41 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 8 March 2004.

Applicant's election with traverse of Group I in Paper No. 8 March 2004 is acknowledged. The traversal is on the ground(s) that the present invention cannot be made with the double crucible method and it would not be practical to fuse them to silica fibers. This is not found persuasive because the claims do not require an ability to fuse fibers to silica fibers. Also, Applicant merely points out that Applicant does not know how to create the fibers with a double crucible method. This argument is insufficient, evidence or rationale are required to establish that something cannot be done. All the claim requires is a transition region – it would be rather easy to change the core characteristics during the creation of a fibers. For example, one can have three crucibles, Two middle ones where one changes from 100% flow to 0% flow, while and outer concentric crucible changes from 0% flow to 100% flow.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-7 and 10-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chown GB 1448080.

Chown discloses the invention in claims 1-2 and page 3 lines 55-59. Chown does not disclose what type of glass the glass tube is made of. It would have been obvious to use a silica-based glass for the tube, because of the known advantages for using silica glass: strength, optical clarity, etc.

Claims 4-6: it would have been obvious to have as short or as long of a Chown transition fiber as desired – depending upon the desired application.

Claim 7: see page 1, lines 85-92.

Claim 10: it is deemed that the passage on page 3, lines 55-59 indicates to anyone reading it that the Chown fiber contains only transition sections.

Claim 11-15: it would have been obvious to perform routine experimentation to determine the processing parameters – dependant upon what compositions one uses.

Claim 16: Chown is directed to making coupling fibers, by joining two fibers together with the transition fibers. There is no disclosure as to how the fibers are

connected. Fusion coupling is a well known method. It would have been obvious to fusion bond the Chown fibers for the known advantages of fusion bonds.

Claim 17: as Examiner understand it, given a large enough wavelength range, any fiber will have both negative and positive dispersions for particular sub ranges within the main range.

Claims 18- 20 are clearly met.

Claim 21, it would have been obvious to use different ingredients so as to create the different glasses, because different compositions is the most pronounced way to make different glasses.

Claim 22, 28-29 appears to define the starting materials in terms of how they were created. However, the claims do not require the actual creation of the pellets. It is deemed that one looking at the Chown pellets would not be able to tell how they were formed – thus they are equivalent to the same structures that are made from fused silica preforms as claimed.

Claims 23-24 are clearly met.

Claim 25 does not limit what types of transition regions it is stretched into. One can specify regions sufficiently broad to encompass multiple Chown pellets.

Claim 26, it would have been obvious to cut as many fibers as are needed from the Chown product.

Claim 27: Chown does not disclose three types of pellets. It is noted that Chown indicates it is OK to have non-nesting components (page 2, lines 51-54). IT would have been obvious create different stacks within one tube so that one can make multiple

different fibers in one process. In for example, it would have been obvious to fill a portion of the tube with the pellets of 1a, and fill the rest of the preform with another stack of a different kind, with no new or unexpected results.

Claims 2-3 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chown as applied to claim 1 above, and further in view of Berkey EP 0737873.

The addition of soot to aid in the fusing together of components is well known as evidenced by the Berkey document. Page 2, lines 40-42 discloses the fusing of the Chown assembly. It would have been obvious to add soot to the circumference of the Chown assembly, so as to aid the fusing of the components.

Claims 8-9: Chown doesn't disclose cleaning. Berkey does disclose cleaning. It would have been obvious to clean the Chown preform in the manner disclosed by Berkey, so as to remove as many impurities as possible.

Claims 1-26, 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berkey EP 0737873.

See figure 30a and the associated text of Berkey. 266 is the tube, 250 and 252 are the pellets. The Heating and pulling would have been necessary to draw the preform. Berkey does not disclose the severing. It would have been obvious to sever the fiber: so as to remove one or both ends, which would not have been useable; so as

to create a clean flat surface; or to so that one can have the exact length of fiber desired.

As to the at least part of the transition region "forms" the majority of the selected portion. The term "forms" is not defined in the specification. Examiner found the following definition in a dictionary: "to serve to make up or constitute: be an essential or basic element of". This appears to be a reasonable definition. Examiner did not find a broader definition. Therefore it is deemed that the broadest reasonable interpretation for this limitation requires that the transition region be a basic element of a majority. Since Applicant has not disagreed with this interpretation, it is deemed that Applicant agrees that this is a breadth of interpretation that is acceptable to Applicant.

In other terms: the limitation could be given two different interpretations: -the majority comprises the transition region,- or -the majority consists of the transition region--. Since "comprising" is broader than "consisting", the Office interprets the limitation as requiring that that the majority comprises the transition region. It is clear that the transition region would be an essential or basic element of the fiber; without it, a signal would not could not get from one end of the fiber to the other.

Using a still different interpretation: the term "transition region" is not defined vary narrowly. It is deemed that the broadest reasonable interpretation is any region that comprises a transition. Although Applicant's drawings and arguments show an embodiment where the region consists of a transition – it would be improper for the examiner to interpret the claims so narrowly – especially since Applicant has not

indicated that such a narrow interpretation is desired. Thus one may consider the entire Berkey fiber to be a "transition region" because it is a region that comprises a transition.

Claim 2: See feature 268 of figure 30a

Claim 3: see col. 22, line 39.

Claims 4-6 requires that the selected portion have a length. Applicant's selected portion is arbitrarily chosen. One can arbitrarily choose a 2 meter length in any portion of the Berkey fiber. When one makes a cut, that arbitrary length would have been severed from the rest of the fiber. In other words, when one cuts the fiber from the unusable ends, even though the fiber may be hundreds of miles long, it has a transition region. The claims are comprising in nature and are open to having a fiber with structure other than the selected portion. Again, since Applicant has not argued this interpretation, it is deemed that Applicant agrees that this is a breadth of interpretation that Applicant desires.

Claims 8-10 are clearly met.

Claims 11-13: see col. 22, lines 27-32: the glass is heated to 1450 which is between 1400-1550. It is clear that the preform is heated to all temperatures below 1450 - including to temperatures that are less than the consolidation temperature. Applicant has set forth in claim 13, that heating to a temperature between 1000 and 1400 can simply be a midpoint between heat to a temperature above 1400.

Alternatively, it would have been obvious to not heat all of rod 270 to the highest temperature, because it would simply take extra time and energy to do so. Further it would have been an obvious matter of routine experimentation to determine the optimal processing parameters. Still further: since there is no antecedent basis for "the consolidation temperature" the claim is interpreted as "a consolidation temperature". 1500 is clearly "a temperature at which the preform consolidates".

For claim 12 it is deemed that 1451 is "about 1400".

Claims 14-15, it would have been an obvious matter of routine experimentation to determine the optimal temperature for fiber drawing.

Claims 16-17: col. 7, lines 19-28 states that lengths are joined. It would have been obvious to fusion splice two long fibers to make an even longer fiber. Claim 17: it is clear that both lengths would have both dispersions.

Claims 18-20 and 22-25 are clearly met.

Claim 21: there is no mention of dopants. It would have been obvious to use different dopants, because dopants impart different changes to the refractive index, and the refractive indices have to be different. If the compositions were not different, they would be identical and would have identical properties.

Claim 26: beginnings and endings are transitions. Thus the end and beginning of the fiber are transition fibers. It would have been obvious to sever them because they would not be usable.

Claims 28-29: see col. 22, lines 2-7.

Response to Arguments

Applicant's arguments filed 8 March 2004 have been fully considered but they are not persuasive.

IT is argued that the removal of the ends would not capture the interface region in the end of the fiber. Examiner agrees, the transition interface would occur in the main length of the fiber. That portion of the fiber would be severed from the ends. The claim does not require that the ends of the fiber have the transition interface.

It is argued that the claims do not have the phrases "the majority comprises the transition region" and phrases "the majority comprises the transition region". This is true, the rejection does not state that it does. The rejection merely indicates the proper way to interpret the "transition region forms the majority of the length" limitation.

It is further argued that the selected portion is not arbitrarily chosen, because it must contain at least part of the transition region. Examiner disagrees, although it has to have part of the transition region, beyond that, it is arbitrarily chosen. It could be a 3 meter length or a 10 meter length that has the transition region – since the length is arbitrary one has to conclude it is arbitrarily chosen.

Regarding claim 10, it is argued the transition region of Berkey would occupy a very small minority of the length of the selected portion. It appears that Applicant has chosen the entire length of the Berkey fiber to be "the selected portion". There is simply no basis to interpret "selected portion" so narrowly. Whereas such is a reasonable scope, it is not the BROADEST reasonable scope. For example, if one has coupler on

Applicant's selected portion, does that cease to be the selected portion merely because it has additional structure added to it? The claims are comprising in nature and are open to having structure which is beyond the transition region.

The arguments regarding claims 16-17: it is unclear what Applicant is arguing – there is no disagreement with the conclusion that the claims are obvious for the reasons put forth in the rejection. It is deemed that Applicant agrees with the conclusions.

Regarding claim 26: In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., that the transition region need the interface) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Although the specification discloses a specific type of transition, the claims are not limited there to.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

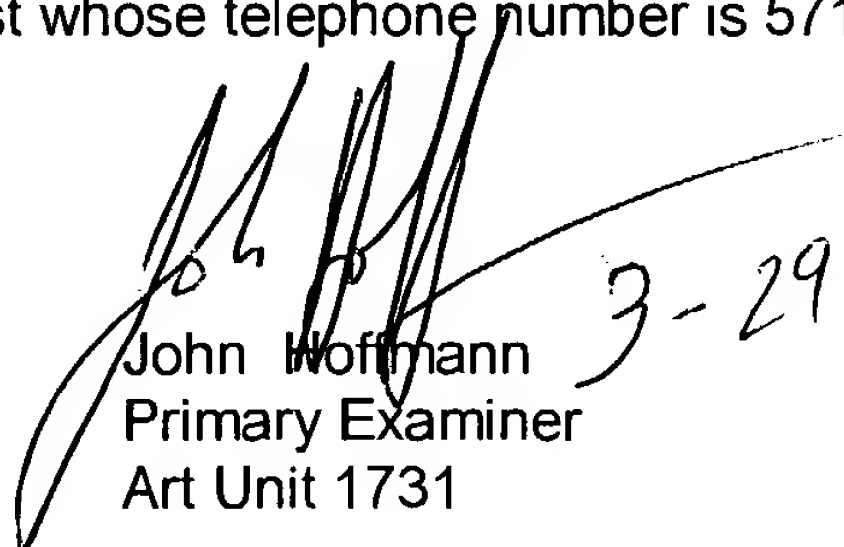
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1700.


John Hoffmann
Primary Examiner
Art Unit 1731

3-29-04